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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,460	01/30/2006	Shuichi Tasaka	10873.1829USWO	3887
53148	7590	09/17/2010	EXAMINER	
HAMRE, SCHUMANN, MUELLER & LARSON P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902			BIBBINS, LATANYA	
			ART UNIT	PAPER NUMBER
			2627	
			MAIL DATE	DELIVERY MODE
			09/17/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/566,460	TASAKA ET AL.	
	Examiner	Art Unit	
	LATANYA BIBBINS	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 May 2010.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,4 and 6-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,4 and 6-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 23 March 2009 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 15, 2010 has been entered.
2. In the remarks filed on May 12, 2010, Applicant amended claims 1 and 2 and submitted arguments for allowability of pending claims 1, 2, 4 and 6-23.

Response to Arguments

3. Applicant's arguments filed May 12, 2010 have been fully considered but they are not persuasive.

Applicant argues that the feature of claim 1 that "the outer boundary of the additional user information is defined as inside the outer power calibration area" is not taught or suggested by Hiroki.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., that "the outer boundary of the additional user information is defined as inside the outer power calibration area") is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.

1993). Examiner notes that the claim recites that said outer boundary for recording additional user information is “inward of the outer power calibration area.” Giving the broadest reasonable interpretation of the claim language, a location on the recording medium which is “inside the outer power calibration area” may differ from a location on the recording medium which is “inward of the outer power calibration area” (i.e. .”inward of the outer power calibration area” may be interpreted as toward the inside of the outer power calibration area).

Applicant additionally argues that Adachi is silent and does not disclose whether the final recording is “address information of a point defining an outer boundary for recording additional user information in the data recordable area is in the record management area and defines the outer boundary that is inward of the outer power calibration area” and that Adachi does not make note of the outer boundary or of the power calibration area.

Examiner respectfully disagrees. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this instance, Hiroki clearly discloses the data recordable area for recording user information signals, a recording management area and an outer power calibration area with an outermost point of recorded user information on the recording layer being on the inner periphery side relative to the outer power calibration area and with said

outer boundary for recording additional user information being inward of the outer power calibration area (see the rejection below). The recording management area of Hiroki stores “information concerning a disc”. Hiroki provides examples of such information in column 13 lines 7-10, however the examples do not include address information of a point defining an outer boundary for recording additional user information in the data recordable area is in the record management area. Adachi, however, discloses in paragraph [0044] wherein address information of a point defining an outer boundary for recording additional user information in the data recordable area is in the record management area. One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the address information of Adachi into the recording management area of Hiroki in order to provide a high performance recording apparatus in which recording position deviation can be minimized (as suggested by Adachi in paragraphs [0009] and [0011]).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. *Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably*

convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claim 2 recites "an outer power calibration area is provided ***between*** the data recordable area and the lead-out area ad not in the data recordable area." However, in the previous claim 1 "an outer power calibration area is provided ***in*** the data recordable area."

Claim 2 is limited to having both an outer power calibration area to be located "***between*** the data recordable area and the lead-out area and not in the data recordable area" as recited in claim 2 and also an outer power calibration area located "***in*** the data recordable area" as recited in claim 1. While the specification discloses that in an information recording medium having one or more layers there may be two outer power calibration areas (Figures 8A-8E and 9-11), the specification does not disclose that one of the outer power calibration areas is located "in the data recordable area" and the other "between the data recordable area and the lead-out area and not in the data recordable area."

Original claim 2 supports a PCA between the data recordable area and the lead-out area. Original claim 3 supports a PCA being part of a data recordable area. Figure 1 shows the 2 claimed PCA positions but at different times of use of the medium. There are two areas of Figure 1 which can be interpreted as data recordable areas, user area 50 and user data area 51. The PCA is located outside the user data area 51 and inside the user area 50. However, there is no support in the original disclosure of a medium having a PCA between the data recordable area and the lead-out area and another

PCA in the data recordable area. Hence, the medium as recited in claim 2 includes new matter not supported by the original disclosure.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 2, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841) in view of Adachi (US PGPub Number 2002/0154585 A1).**

Regarding claim 1, Hiroki discloses an information recording medium having one or more recording layers including a data recordable area for recording user information signals (see areas c-f of Figure 11), a lead-in area provided on an inner periphery of the data recordable area (see the Lead-In Zone of Figure 11), an inner power calibration area provided further on the inside of the lead-in area for recording test recording patterns (see the Inner Test Zone in Figure 11), and a recording management area for recording management information related to the inner power calibration area (see the Inner Control Zone in Figure 11), wherein an outer power calibration area is provided in the data recordable area with an outermost point of recorded user information on the one or more recording layers being on the inner periphery side relative to the outer power calibration area (see the Outer Test Zone in

Figure 11), with said outer boundary for recording additional user information being inward of the outer power calibration area (see Figure 11 and the location of the Data Zone which stores data relative to the Outer Control Zone which stores information concerning the disc thereby creating a boundary between the user information and the power calibration area).

The recording management area of Hiroki stores “information concerning a disc” (see the examples of such information in column 13 lines 7-10), however Hiroki does not specifically disclose that address information of a point defining an outer boundary for recording additional user information in the data recordable area is in the recording management area. Adachi, however, discloses wherein address information of a point defining an outer boundary for recording additional user information in the data recordable area is in the record management area (see the discussion in paragraph [0044]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the address information of Adachi into the recording management area of Hiroki. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to provide a high performance recording apparatus in which recording position deviation can be minimized (as suggested by Adachi in paragraphs [0009] and [0011]).

Regarding claim 2, Hiroki further discloses the information recording medium according to claim 1, wherein: the one or more recording layers further includes a lead-out area (see the lead-out zone of Figure 11), and an outer power calibration area is

provided between the data recordable area and the lead-out area and not in the data recordable area (see the location of the Outer Test Zone in relation to the Data Zone and the Lead-Out Zone in Figure 11).

Regarding claim 12, Hiroki further discloses the information recording medium according to claim 1, wherein an outer recording management area used for recording management information related to the outer power calibration area is provided on the outside of the data recordable area (see the Outer Control Zone in Figure 11).

Regarding claim 15, Hiroki further discloses an information recording and reproducing device for recording desired user information signals in the data recordable area of the information recording medium according to claim 1, comprising: a rotary drive unit that rotates the information medium (see the spindle motor, Figure 7 element 11), an optical pickup that performs information signal recording or information signal reproduction by irradiating the information recording medium with light (see the information recording/reproducing head, Figure 7 element 6), and a calibration control unit that performs calibration of irradiation power using the optical pickup by moving the optical pickup at least to either one of the inner and outer power calibration areas of the information recording medium (see the CPU, Figure 7 element 1 and the corresponding discussion in column 11 lines 28-35, column 12 lines 45—column 13 line 25).

8. **Claims 4, 8, 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841) in view of Adachi (US**

PGPub Number 2002/0154585 A1), as applied to claim 1 above, and further in view of Ito et al. (US Patent Number 7,184,377 B2).

Regarding claim 4, the combination of Hiroki and Adachi disclose the information recording medium according to claim 1 as noted in the 35 U.S.C. 103(a) rejection above. Hiroki further discloses in the one recording layer, the outer power calibration area is provided on the outer periphery of the final point of recording of the user information signal (Hiroki Figure 11).

Hiroki and Adachi, however, fail to specifically disclose, while Ito discloses that a plurality of recording layers are present(Figure 6 elements 51 and 52), recording of a user information signal on one recording layer out of two adjacently stacked recording layers among the plurality of recording layers is performed from the inner periphery to the outer periphery of the information recording medium (see the recording direction in the first recording layer 51 in Figure 6) and recording of a user information signal on the other recording layer of the two recording layers is performed from the outer periphery to the inner periphery of the information recording medium (see the recording direction in the second recording layer 52 in Figure 6) in the other recording layer, the outer power calibration area is provided on the outer periphery of the starting point of recording of the user information signal (Figure 6 element 11 in the second recording layer 52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ito into that of Hiroki and Adachi and have a multilayer recording medium. One of ordinary skill in the art at the

time the invention was made would have been motivated to combine the teachings in order to provide an information recording medium having high recording density and a large capacity (as suggested by Ito in column 1 lines 18-20).

Regarding claim 8, the combination of Hiroki , Adachi and Ito disclose the information recording medium according to claim 4. Ito further discloses wherein an nth outer power calibration area and an (n+1)th outer power calibration area are provided, respectively, in an adjacently stacked nth recording layer and (n+1)th recording layer, with an nth middle area provided on the inner periphery of the nth outer power calibration area in the nth recording layer, and an (n+1)th middle area provided on the inner periphery of the (n+1)th outer power calibration area in the (n+1)th recording layer (see the middle area of Ito in Figures 6, 12 and 16).

Regarding claim 9, the combination of Hiroki, Adachi and Ito disclose the information recording medium according to claim 8. Ito further discloses the information recording medium according to claim 8 wherein in each adjacently stacked nth recording layer and (n+1)th recording layer, the nth middle area and the (n+1)th middle area, as well as the nth power calibration area and the (n+1)th power calibration area, are arranged by shifting them, in their entirety, towards the inner periphery, such that at least a portion of the nth middle area and the (n+1)th middle area, as well as the nth power calibration area and the (n+1)th power calibration area, is positioned on the inside of the outermost location that permits recording user information signals (see the middle area of Ito in Figures 6, 12 and 16).

Regarding claim 23, the combination of Hiroki, Adachi and Ito disclose an information recording and reproducing device for recording desired user information signals in the data recordable area of the information recording medium according to claim 4, comprising: a rotary drive unit that rotates the information recording medium (see the spindle motor of Hiroki in Figure 7 element 11), an optical pickup that performs information signal recording or information signal reproduction on a recording layer by irradiating any of the recording layers among the plurality of recording layers provided in the information recording medium with light (see the information recording/reproducing head of Hiroki, Figure 7 element 6), and a calibration control unit that performs calibration of irradiation power using the optical pickup by moving the optical pickup at least to either one of the inner and outer power calibration areas of the information recording medium on the recording layer where one intends to perform recording or reproduction of an information signal (see the CPU of Hiroki, Figure 7 element 1 and the corresponding discussion in column 11 lines 28-35, column 12 lines 45—column 13 line 25).

9. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841), Adachi (US PGPub Number 2002/0154585 A1) and Ito et al. (US Patent Number 7,184,377 B2), as applied to claim 4 above, and further in view of Lee et al. (US PGPub Number 2008/0013425 A1).

Regarding claim 6, the combination of Hiroki, Adachi and Ito disclose the information recording medium according to claim 4. Hiroki, Adachi and Ito fail to

disclose, while Lee discloses wherein in an nth inner power calibration area, an (n+1)th inner power calibration area, an nth outer power calibration area, and an (n+1)th outer power calibration area provided, respectively, on an adjacently stacked nth recording layer and (n+1)th recording layer, test recording execution areas provided in the respective power calibration areas are provided such that they don't mutually overlap in the direction of stacking of the recording layers (see the location of the OPC areas in Figures 3A, 4A, 4B, 5A, 5B, 6A-6C, 7A, 7B, 8 and 9 and the discussion in the abstract and paragraph [0047]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Hiroki, Adachi and Ito with Lee. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to prevent the degradation of recording due to an influence of an OPC area in an information storage layer upon an OPC area in an adjacent information storage layer (as suggested by Ito in the abstract).

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841), Adachi (US PGPub Number 2002/0154585 A1)and Ito et al. (US Patent Number 7,184,377 B2), as applied to claim 4 above, and further in view of DVD+R 4.7 Gbytes Basic Format Specifications version 1.2, System Description (herein Non-Patent Document 1).

Regarding claim 7, the combination of Hiroki, Adachi and Ito disclose the information recording medium according to claim 4. Hiroki, Adachi and Ito, however, fail

to specify the direction of test recording. Non-Patent Document 1, however, discloses that the direction of test recording performed for power calibration in the inner power calibration area and in the outer power calibration area is opposite to the direction of recording of the user information signal on the one recording layer (see the discussion regarding the outer disc test zone in section 21.3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Non-Patent Document 1 into the teachings of Hiroki, Adachi and Ito. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to comply with the DVD+R specifications.

11. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841) in view of Adachi (US PGPub Number 2002/0154585 A1), as applied to claim 1 above, and further in view of DVD+R 4.7 Gbytes Basic Format Specifications version 1.2, System Description (herein Non-Patent Document 1).

Regarding claim 10, the combination of Hiroki and Adachi disclose the information recording medium according to claim 1 as noted in the 35 U.S.C. 103(a) rejection above. Hiroki further discloses the outer power calibration area provided in a circular fashion (see the Outer Test Zone of Figure 11) but fails to specifically disclose, while Non-Patent Document 1 discloses wherein the outer power calibration area is provided at a distance of at least 0.2 mm on the outside from the outermost recordable

location in the data recordable area (see the location of the Outer Disc Test Zone in relation to the Data Zone in Table 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the location of the outer power calibration are taught by Non-Patent Document 1 into the information recording medium of Hiroki and Adachi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to comply with the DVD+R specifications.

Regarding claim 11, the combination of Hiroki and Adachi disclose the information recording medium according to claim 1 as noted in the 35 U.S.C. 103(a) rejection above but fail to disclose wherein recording management information related to the outer power calibration area also is recorded in the recording management area. Non-Patent Document 1, however discloses the claimed invention except that it contains both an inner and outer recording management area (the Inner and Outer Disc Administration Zones).

It would have been an obvious matter of design choice to allow the inner disc administration zone of Non-patent document 1 control both the inner and outer test zones since the applicant has not disclosed that doing so solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with both the inner and outer administration zones.

12. Claims 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiroki (US Patent Number 5,703,841) in view of Adachi (US PGPub Number 2002/0154585 A1), as applied to claim 1 above, and further in view of Morozumi et al. (US Patent Number 2003/0185120 A1).

Regarding claim 13, the combination of Hiroki and Adachi disclose the information recording medium according to claim 1 as noted in the 35 U.S.C. 103(a) rejection above. Hiroki and Adachi, however, fail to disclose, while Morozumi discloses wherein a test recording pattern is recorded in the outer power calibration area when the data recording speed in the data recordable area is a predetermined speed or higher (see the discussion in paragraphs [0016] and [0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Morozumi with that of Hiroki and Adachi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to properly define the laser power such that quality of writing data can be high as suggested by Morozumi in paragraphs [0016] and [0017]).

Regarding claim 14, the combination of Hiroki and Adachi disclose the information recording medium according to claim 1 as noted in the 35 U.S.C. 103(a) rejection above. Hiroki and Adachi, however, fail to disclose, while Morozumi discloses wherein a test recording pattern is recorded in the outer power calibration area when the data recording speed in the data recordable area exceeds the recording speed at

which recording was performed in the data recordable area in the past (see the discussion in paragraphs [0016] and [0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Morozumi with that of Hiroki and Adachi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to properly define the laser power such that quality of writing data can be high as suggested by Morozumi in paragraphs [0016] and [0017].

Regarding claim 16, the combination of Hiroki and Adachi disclose the information recording and reproducing device according to claim 15 as noted in the 35 U.S.C. 103(a) rejection above. Hiroki and Adachi, however, fail to disclose, while Morozumi discloses a rotation control unit that controls the speed of rotation of the information recording medium by the rotary drive unit (the servo processor, Figure 1, element 22 and the discussion in paragraph [0070]), wherein the calibration control unit acquires information on the rotational speed of the information recording medium from the rotation control unit (see the discussion in paragraph [0017]) and, depending on the acquired rotational speed information, and determines in which to perform calibration of the irradiation power using the optical pickup, whether the inner power calibration area or the outer power calibration areas (see the discussion in paragraphs [0016] and [0017]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Morozumi with that of Hiroki

and Adachi. One of ordinary skill in the art at the time the invention was made would have been motivated to combine the teachings in order to properly define the laser power such that quality of writing data can be high as suggested by Morozumi in paragraphs [0016] and [0017]).

Regarding claim 17, the combination of Hiroki, Adachi and Morozumi disclose wherein the calibration control unit carries out irradiation power calibration using the optical pickup in the outer power calibration area when the speed represented by the rotational speed information exceeds a predetermined speed (see the discussion in Morozumi paragraphs [0016] and [0017]).

Allowable Subject Matter

13. Claims 18-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 18-22 are allowable for the reasons indicated in the Office Action mailed December 23, 2008.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LATANYA BIBBINS whose telephone number is (571)270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LaTanya Bibbins/
Examiner, Art Unit 2627